CR409

USB/SD/MMC Player with FM/MW Tuner

Operating Instructions

SAFETY INFORMATION

PRECAUTIONS

- Use only in a 12-volt DC negative-ground electrical system.
  Disconnect the vehicle's negative battery terminal while mounting and connecting the unit.
- When replacing the fuse, be sure to use one with an identical amperage rating.
  Using a fuse with a higher amperage rating may cause serious damage to the unit.
- DO NOT attempt to disassemble the unit.
- Make sure that pins or other foreign objects do not get inside the unit; they may cause malfunctions, or create safety hazards such as electrical shock or laser beam exposure.
- Please power off this unit at once and send it back to the after-sales service center or the dealer /distributor you purchased from if one of the following symptoms is found:
  (1) Water or other obstacle enters the unit;
  (2) Smoking;
  (3) Peculiar smell.
- If you have parked the car for a long time in hot or cold weather, wait until the temperature in the car becomes normals before operating the unit.
- Keep the volume at a level at which you can hear outside warning sounds (horns sirens, etc.).
- Stop the car before performing any complicated operation.

To provide a clear demonstration and an alternative for easy understanding of the operation of this unit, graphic illustration was used. However, this illustration is not necessary printed as the actual image found on the unit.

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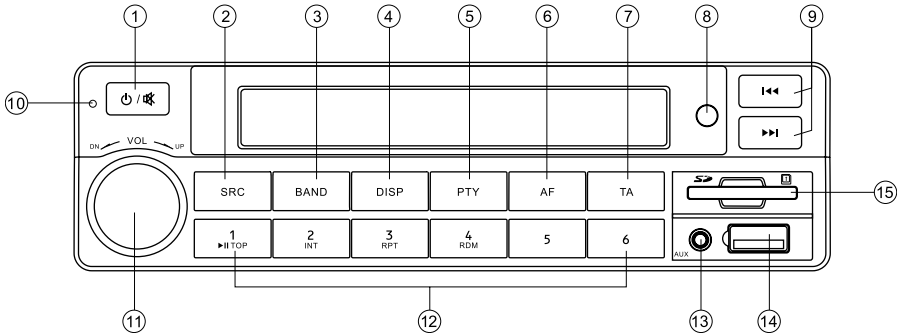
PANEL CONTROLS

1. - Press to turn on the unit.
   - When on, press to mute the volume.
   - When on, press more than 2 seconds to turn off the unit.
2. - Press SOURCE button will toggle the audio source: TUNER -> USB -> CARD -> Aux-in
3. - In tuner mode, press once or more to select FM1->FM2->FM3->MW1->MW2. Press more than 2 seconds to auto search and store stations in available memory.
   - In USB/CARD mode, press more than 2 seconds to enter MP3 search mode (see “MP3 Playback”)
4. - In TUNER mode
   Press DISP button once or more to select display content with the following sequence:
   Freq->Time->PTY
   - In USB/CARD mode
   Press DISP button once or more to select display content with the following sequence:
   Folder -> File -> Album -> TITLE -> Artist -> Time
   - Press more than 2 seconds to enter system MENU (see “SYSTEM MENU”)
5. - Program type
6. - Alternative frequency
   - REG on/off (long press)

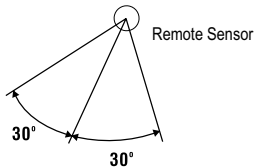


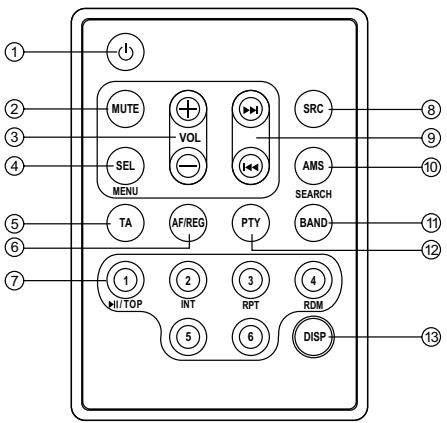
7. - Traffic announcement identification
8. - Remote sensor
9. - Radio tune
   - To fast search within a track/skip to next or previous track
10. - Reset hole
11. - Rotate the knob to adjust the volume level.
    - Push to change EQ preset: OPTIMAL, FLAT, POP, USER, TECHNO, ROCK, CLASSIC, JAZZ.
    - Push more than 2 seconds to enter audio setup menu, then press briefly once or more to select BASS/TREBLE/BALANCE/FADER, rotate the knob to adjust level.
12. - Button 1: Play/pause
    Press more than 2 seconds if you want to start playback from the beginning of the first track of your USB or SD/MMC card.
    - Button 2: Intro play (10 sec.)
    - Button 3: Track repeat play
    - Button 4: Track random play
    - Button 5: Folder down
    - Button 6: Folder up
    * 1~6 Radio preset
    Press to tune in a preset station. Hold for more than 2 seconds to store station.
13. - Aux-in jack
14. - USB connector
15. - SD/MMC card slot

REMOTE CONTROLS

Operating range

Point the remote control unit to the remote sensor when you operate with it.
The remote control can operate within a distance of 3~5m.





1. - Power on/off
2. - Mute
3. - Volume
4. - Press to change EQ preset.
   - Press more than 2 seconds to enter audio setting mode.
   - In Menu mode, short press SEL key to select menu list function
5. - Traffic announcement identification
6. - Alternative frequency
   - REG on/off (long press)
7. - Disc Playback
   Button 1: - Play/Pause
   - Top play (press more than 2 sec)
   Button 2: - Intro play (10 sec)
   Button 3: - Track repeat play
   Button 4: - Track random play
   Button 5: - Folder down
   Button 6: - Folder up
   - Radio Preset
   Press to listen to a preset station.
   Press and hold to store station.
8. - Radio/USB (when USB is connected)/Card (when SD/MMC card inserted)/Aux-in
9. - Radio tune
   - Track seek
10. - AMS: Radio preset scan/Radio auto preset
    - SEARCH: MP3 search mode
11. - Band switch: FM1, FM2, FM3, MW1, MW2
12. - Program type
13. - Display switch
    - Menu mode (long press)

Replacing the lithium battery of remote control unit.

When the range of the operation of the card remote control becomes short or no functions while operating. Replace the battery with a new lithium battery. Make sure the battery Polarity replacement is correct.

1. Pull out the battery holder while pressing the stopper.
2. Insert the button-type battery with the stamped(+) mark facing upward.
   Insert the battery holder into the remote control.

WARNING:

- Store the battery in place where children cannot reach. If a child accidentally swallows the battery, consult a doctor immediately.
- Do not recharge, short, disassemble or heat the battery or dispose it in a fire. Doing this may cause the battery to give off heat, crack or start a fire.
- Do not leave the battery with other metallic materials or poke the battery with tweezers or similar tools.
- When throwing away or saving the battery, wrap it in tape and insulate.

GENERAL OPERATION

Power On/Off Button

On the panel: Press the ⏻ / 🔇 button to turn the unit on when the vehicle ignition switch is on. Press and hold the button to turn the unit off.

On the remote control: Press the ⏻ button to turn on/off the unit.

Mode Button (SRC)

Press the SRC button to change between Radio, USB (when USB is connected), Card(when SD/MMC card is in) or AUX play.

Adjust Volume level

On the panel: Rotate the VOL control to adjust volume level. Rotate it clockwise to increase and anticlockwise to decrease the volume.

On the remote control: Press ▲ / ▼ button to adjust volume level.

Audio Mute

On the panel: When on, press the ⏻ / 🔇 button to mute the volume from the system. "MUTE" will appear on the display panel and the volume will be muted. Press the MUTE button again, or rotate or press the VOL control to return the volume level to the setting in use before the Mute function was activated.

On the remote control: Press MUTE button to mute the volume.

Audio Controls

On the panel: To adjust the bass, treble, balance and fader, press the VOL control more than 2 seconds, then press repeatedly until the appropriate audio control appears on the display panel. Within five seconds, rotate the VOL control to adjust the audio settings for the selected function.

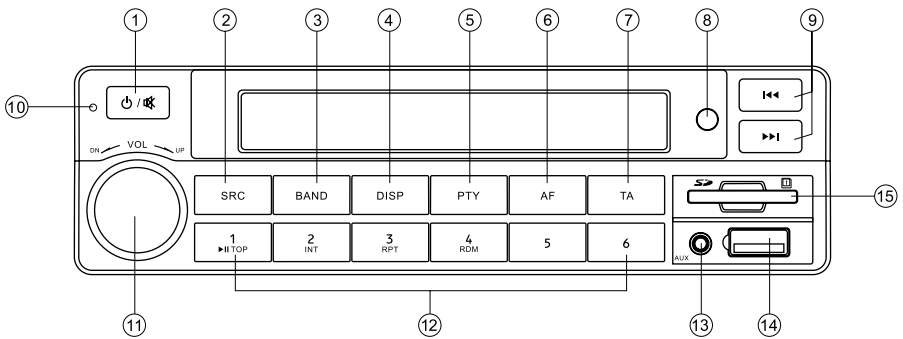
On the remote control: Press SEL button more than 2 seconds to enter audio setting mode, then press SEL repeatedly until the appropriate audio control appears on the display panel. Within five seconds, use VOL buttons to adjust the audio settings for the selected function.

Auxiliary Input

To access an auxiliary device:

1. Connect the portable audio player to the AUX interface on the front panel.
2. Press the SRC button to select Aux-In mode.

Press SRC again to cancel Aux-In mode and go to the next mode.



TUNER INSTRUCTIONS

AM/FM Band Selector (BAND)

During radio play, press the BAND button to choose between three FM and two MW bands. The indication “MW” or “FM” appears on the display panel according to your selection.

Up/Down Tuning

Press the seek ⏮ / ⏭ to tune to the previous/next available station. Press and hold the seek ⏮ / ⏭ button to activate manual tuning. You can then use the tune/track buttons to tune stations downward/upward step-by-step. The current frequency will be shown in digital format on the display panel.

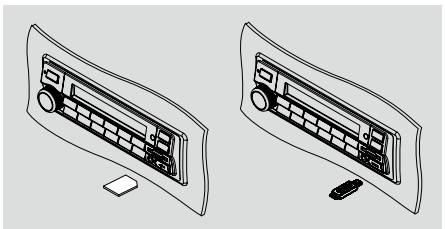
Auto Store

On the panel: Press and hold BAND button to automatically select six strong stations and store them in the current band. The new stations replace stations already stored in that band. Press 1-6 button to listen to a preset station.

On the remote control: Press AMS button to search and sore 6 strong stations in the memory.

USB/SD/MMC INSTRUCTIONS

1. Loading SD/MMC card
   Insert the SD/MMC card into the slot, with the front side at top.
   The unit will play the music automatically and the LCD will show CARD.
2. Take out SD/MMC card
   Push SRC button and switch to non CARD mode, slight press SD/MMC card, take out the card when it was pop out.
3. Loading USB equipment
   Open the rubber cap, insert the USB into the connector and the unit play the music in the USB storer automatically, and the LCD will show USB.
4. Take out USB equipment
   Push the SRC button and switch to non USB mode, then take off the USB storer, close the cap.



USB/SD/MMC Notes

USB functions (flash memory type) MP3 music play

1. SD/ MMC card support
2. USB flash memory 2 in 1 (SD/MMC) support
3. Fat 12/fat 16/fat 32 is possible
   - fat 12/16 (dir : 200 support, file : 500 support)
   - fat 32 (dir : 200 support, file : 500 support)
4. File name : 32 byte/dir name : 32 byte/tag name : 32 byte
5. Tag (ID3 tag ver 2.0)
   - title/artist/album : 32 byte support
6. File name : 32 byte/dir name : 32 byte/tag name : 32 byte
7. Multi card reader not support
8. USB 1.1 support, USB 2.0 support (It can not support USB 2.0 speed. Just, get be same speed with USB 1.1).

* Not all USB devices are compatible with the unit.

MP3/WMA INSTRUCTIONS

Display Information

During playback, press the DISP button to display file information in the following order: FOLDER, FILE, ALBUM, TITLE, ARTIST, TIME.

Skip/Seek

Press ⏮ / ⏭ button to play previous/next track.
Press and hold ⏮ / ⏭ button to seek fast backward/forward, release the button to playback normally.

Searching Folders

1. Press and hold BAND button to enable MP3 searching mode.
2. Press the VOL knob to enter FOLDER searching mode, then rotate the knob to select a folder.

Searching Files

1. Press and hold BAND button to enable MP3 searching mode.
2. Rotate the knob to select FILE searching mode and press the knob to enter.
2. Rotate VOL knob to select one of characters A-Z, _ , - , + , and 0-9 for the first character.
3. Press the VOL knob to confirm entry and the second position will flash.
4. Use VOL button to select the second digit.
5. Repeat above steps to enter the first digit, if necessary.
   NOTE: The unit will only allow the selection of digits that correspond with the number of files on the media you are searching.
6. Once the entry finished, press and hold the VOL knob to search the selected file.

MP3 Overview

- MP3 is short for MPEG Audio Layer 3 and refers to an audio compression technology standard.
- The unit can read MP3 files written in the format compliant with ISO 9660. However it does not support the MP3 data written by the method of packet write.
- The unit can not read an MP3 file that has a file extension other than ".mp3".
- If you play a non-MP3 file that has the ".mp3" extension, you may hear some noise.
- In this manual, we refer to what are called "MP3 file" and "folder" in PC terminology as "Track" and "Album", respectively.
- Maximum number of directory level is 8, including the root directory. Maximum number of files and folders per disc is 256.
- The unit may not play tracks in the order of track numbers.
- The unit plays only the audio tracks if a disc contains both audio tracks and MP3 files.

MP3/WMA INSTRUCTIONS

- When playing a disc of 8kbps or VBR*, the elapsed playing time in the display window will not be correct and also the intro play may not function properly.
  *VBR: Variable Bit Rate.

Note on creating your own CD-Rs or CD-RWs containing MP3 files

- To enjoy high quality sound, we recommend converting to MP3 files with a sampling frequency of 44.1 kHz and a fixed bit rate of 128 kbps.
- DO NOT store more than 256 MP3 files per disc.
- For ISO 9660-compliant format, the maximum allowable depth of nested folders is 8, including the root directory(folder).
- When CD-R disc is used, playback is possible only for discs which have been finalized.
- Make sure that when MP3 CD-R is burned that it is formatted as a data disc and NOT as an audio disc.
- You should not write non-MP3 files or unneeded folders along with MP3 files on the CD-R otherwise it takes a long time until the unit starts to play MP3 files.
- With some CD-R media, data may not be properly written depending on their manufacturing quality. In this case, data may not be
  reproduced correctly. High quality CD-R disc is recommended.
- Up to 16 characters are displayed for the name of an Album or a Track. ID3 TAG version 1.x is required.
- Note that the unit may not play tracks in the order that you wrote them to the disc.

MENU FUNCTION

Press and hold DISP button more than 2 seconds to enter menu mode, then press the VOL knob repeatedly to changes the mode as follows:
DEMO ON/OFF -> BKO ON/OFF-> KEY BLUE/RED -> TIME -> ESP 12/45 -> LOCAL/ DX -> BEEP ON/OFF -> STEREO/MONO -> V-LAST/ADJ -> SW ON/OFF -> ROLL ON/ OFF -> LOUD ON/OFF -> TA SEEK/ALARM -> MASK DPI/ALL -> TA VOL -> RETUNE L/S

DEMO ON/OFF

Demo on. Start demo mode automatically when device is not in use for 2 min.

BKO 10s/20s/OFF

Rotate the knob to choose Blackout time 10s, 20s or off. If the blackout is turned on, the screen will turn off 10 or 20 sec after last access.

KEY BLUE/RED

Key button color: RED or BLUE for selection.

MENU FUNCTION

TIME

Use UP/DOWN/ ▶▶| / |◀◀ /rotary knob to set time.

EPS mode

ESP 12s: Selected as CD-ESP time 12 seconds, MP3-ESP time >100 seconds.
ESP 45s: Selected as CD-ESP time 45 seconds, MP3-ESP time >100 seconds.

LOCAL/DX mode

Rotate the knob to choose tuner sensitivity local or distant.

BEEP ON/OFF

When on, beep sound response in each input.

STEREO/MONO mode

Rotate the knob to choose FM stereo or mono.

V LAST/ADJ mode

Rotate the knob to select volume last or volume adjust mode.
VOL LAST: The turn on volume is the level of latest power off.
VOL ADJ: Press the knob to enter, then rotate the knob to set turn on volume level.

SW ON/OFF(optional)

Rotate the knob to choose Sub-woofer on or off.

ROLL ON/OFF

Rotate the knob to choose information display scrolling or not.

LOUD ON/OFF

When listening to music at low volumes, this feature will boost the bass and treble ranges to compensate for the characteristics of human hearing.

TA SEEK/ALARM

If the TA (Traffic Announcements) is turned on and there is no traffic program identification code received in the specified time, no TA/TP will display and either TA ALARM or TA SEEK will be activated.
TA ALARM : Alarm is turned on.
TA SEEK: TA SEEK is automatically activated.

MASK DPI/ALL

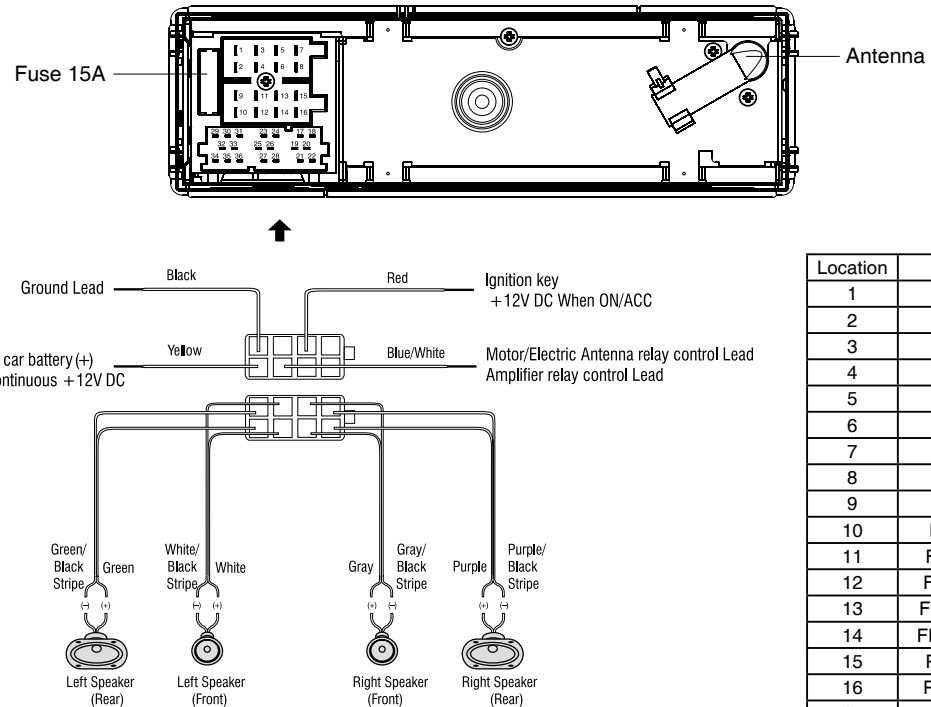
In some cases, the AF function may be influenced by some interference, examples are signals with strong field but without the RDS data. For this reason, the unit has two options to avoid the above interference.
MASK DPI mode : Only AF which has different program identification is masked.
MASK ALL mode : The AF which has different program identification and NO RDS signal with high field strength is masked.

RETUNE L/S

RETUNE-S or RETUNE-L is time length selection of TA SEEK retune interval.
RETUNE-S: short, TA SEEK retune interval is 45 seconds.
RETUNE-L: long, TA SEEK retune interval is 180 seconds.
Remark: RETUNE mode functions for TA during TA SEEK mode only.

ELECTRICAL CONNECTIONS

Wiring Diagram



Location	Function	Location	Function
1	GND	19	
2	B+	20	LINE OUT-GND REAR
3		21	
4	AUTO ANNA	22	LINE OUT-L REAR
5	ACC	23	
6		24	
7		25	
8		26	
9	REAR LEFT(-)	27	
10	REAR LEFT(+)	28	
11	FRONT LEFT(-)	29	
12	FRONT LEFT(+)	30	
13	FRONT RIGHT(-)	31	
14	FRONT RIGHT(+)	32	
15	REAR RIGHT(-)	33	
16	REAR RIGHT(+)	34	
17		35	
18	LINE OUT-R REAR	36	

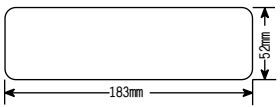
INSTALLATION GUIDE

Installation Procedures

First complete the electrical connections, and then check for correctness.

Installation Opening

This unit can be installed in any dashboard having an opening as shown below.
The dashboard should be 4.75mm - 5.56mm thick in order to be able to support the unit.

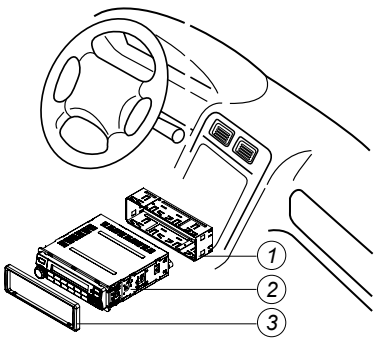


Installation

1. **Inset mounting collar into the dashboard, and bend the mounting tabs out with a screwdriver.**
   Make sure that lock lever is flush with the mounting collar (not projecting outward).

2. **Secure the rear of the unit.**
   Slide the unit into the dashboard.

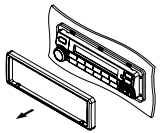
3. **Insert trim plate.**



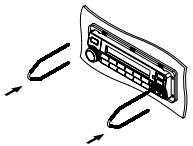
REMOVE THE UNIT

Switch off the power before remove.

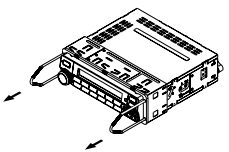
1. Remove the trim plate.



2. Insert both U-keys into holes on the front of the unit until they lock.



3. Pull out the unit.



4. Take out all of the connector between the unit and vehicle.

TROUBLESHOOTING

The following checklist can help you solve some problems which you may encounter when using the unit. Before consulting it, check the connections and follow the instructions in the user manual. Do not use the unit in abnormal condition, for example without sound, or with smoke or foul smell can cause fire or electric shock, immediately stop using it and call the store where you purchased it.

Problem	Possible cause	Solution
General		
The unit will not switch on.	Car ignition is not on. Cable is not properly connected. Fuse is burnt.	Turn your car key in the ignition. Check cable connection. Replace fuse with a new fuse of the same capacity.
No sound	Volume is set at minimum or the mute function is on.	Check the volume or switch the mute function off.
The unit or screen does not work normally.	The unit system is unstable.	Press the RESET button.
TUNER mode		
Unable to receive stations.	The antenna is not connected properly.	Connect the antenna properly.
Poor quality reception of radio station.	The antenna is not fully extended or it is broken.	Fully extend the antenna and if broken, replace it with a new one.
Preset stations are lost.	The battery cable is not properly connected.	Connect the permanent live on the unit to the permanent live on the vehicle.
USB/SD/MMC mode		
Unable to insert USB device or SD/MMC card.	The memory card or USB device has been inserted the wrong way round.	Insert it the other way around.
The USB device or SD/MMC card cannot be read.	NTFS format is not supported.	Check that the file system is in FAT or FAT32 format. Due to different formats, some models of storage devices or MP3 players may not be read.
Remote control		
The remote control is not working or does not work properly	The batteries are low or empty.	Change the batteries.

SPECIFICATION

General	
Power supply:	12V DC(11V-16V) Test voltage 14.4V, negative ground
Maximum power output:	45Wx4 channels
Continuous power output:	20Wx4 channels (4Ω,10% T.H.D.)
Suitable speaker impedance:	4-8 ohm
Fuse:	15A
Dimensions(WxHxD):	182x53x162mm
Weight:	1.0kg
Aux-in	≥300mV
Subwoffer out(optional):	2.0V

FM Stereo Radio	
Frequency range:	87.5-108.0 MHz (EUROPE)
	87.5-107.9 MHz (USA)
Usable sensitivity:	8 dBμ
Quieting sensitivity(S/N=50dB):	12 dBμ
Frequency response:	30Hz-15kHz
Stereo separation:	30dB(1kHz)
Image response ratio:	50dB
IF response ratio:	70dB
Signal/noise ratio:	55dB

MW(AM) Radio	
Frequency range:	522-1620 KHz (EUROPE)
	530-1710 KHz (USA)
Usable sensitivity(S/N=20dB):	30 dBμ

Note: Specifications and the design are subject to change without notice due to improvements in technology.